091799

RECEIVED
10 APR 1986
MINING
RECORDER'S OFFICE
WHITEHORSE, Y.T.

OFFICE OF THE REGIONAL MANAGER
MINERAL RIGHTS
APR 11 1986
WHITEHORSE
YUKON TERRITORY

GEOLOGY AND GEOCHEMISTRY REPORT, 1985

on the

RYE 1-70 CLAIMS

(Gray Ridge Property)

091799

Whitehorse Mining District

N.T.S. 105 D/7W

Latitude 60°17'N

Longitude 134°55'W

Author: M.P. Webster

Owner: Noranda Exploration Company, Limited
(No Personal Liability)

Date: April, 1986

This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 7,000

Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER ONE: INTRODUCTION

1-1: INTRODUCTORY STATEMENT

The RYE 1-70 claims are located on Gray Ridge 48 kilometres south of Whitehorse (Figure 1), 1 kilometre southeast of Annie Lake. The claims were staked June 10, 1984 following examination of a rare geological map by D.D. Cairnes (1917). This detailed map outlines a large rhyolite dyke swarm (Figures 3 and 4) on Gray Ridge 5 kilometres east of the Union Mines on Schnabel Creek where high grade Ag-Pb-Zn-Au mineralization occurs in at least 12 veins adjacent to several rhyolite plugs. These claims were staked to cover geology favourable for precious metal vein deposits found in the Wheaton River area.

The Wheaton River area vein deposits are thought to be associated with remnant Skukum Group volcanic rocks and the high level Tertiary rhyolite plugs distributed along fracture systems generated by the doming and collapse of the Mt. Skukum caldera complex. Mineralized veins include gold-silver, silver-lead and antimony-silver minerals in quartz and calcite gangue materials.

Preliminary work programs conducted during 1984 and 1985 have failed to detect significant precious metal anomalies in rhyolite dykes, quartz veins and country rock on the west side of the claims.

Pan concentrate samples taken east and north of Mount Gillian have anomalous gold values which range from 40 ppb to 1800 ppb Au and further work is recommended in close vicinity to these anomalies.

1-2: LOCATION AND ACCESS

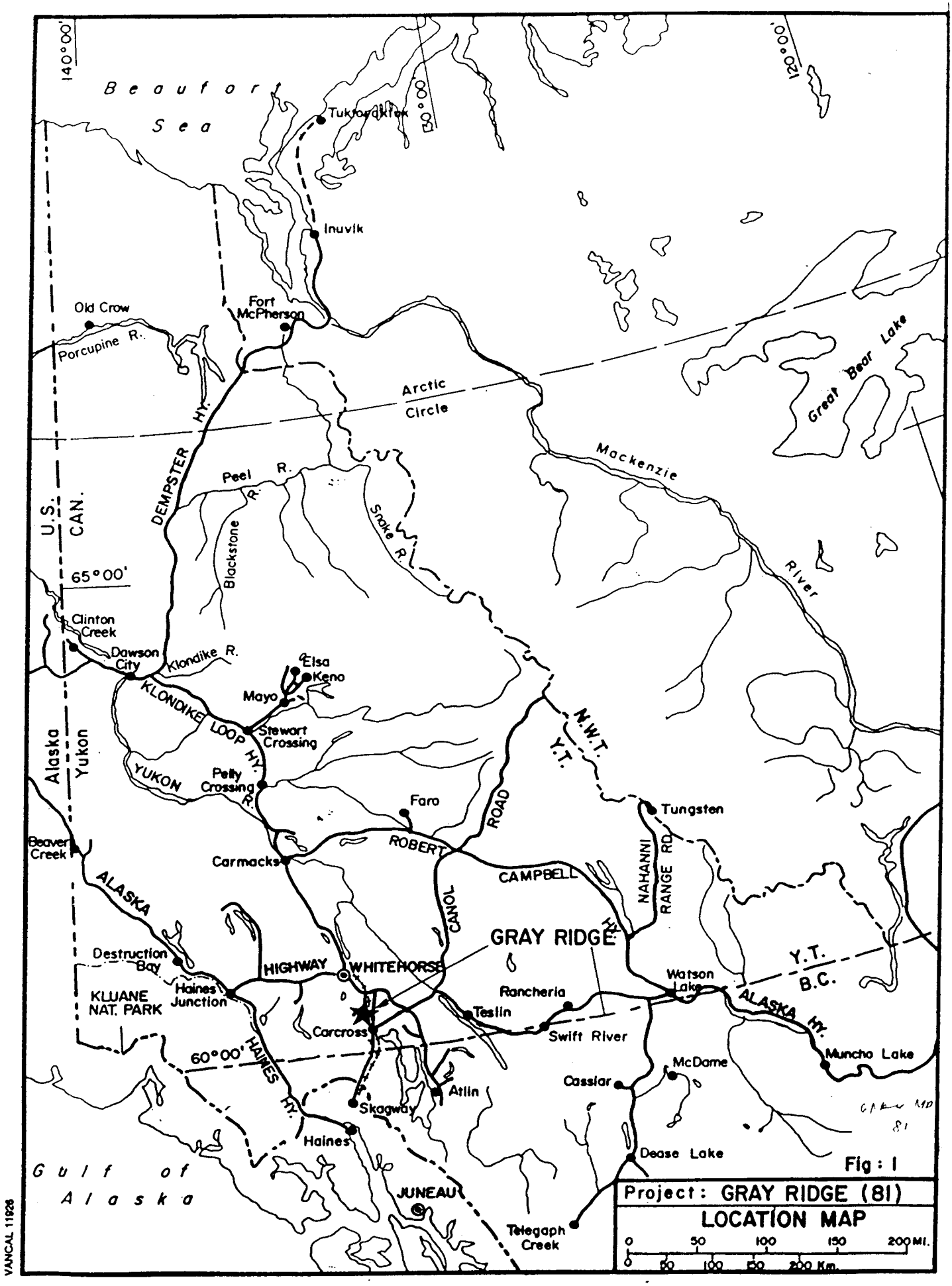
The RYE 1-70 claim group is located 48 kilometres south of Whitehorse at latitude 60°17'N and longitude 134°55'W on N.T.S. 1:50,000 mapsheet 105 D/7W (Figure 1).

Access to the property is via the Annie Lake road 1.5 kilometres west of the claims. The White Pass Railway and Whitehorse-Skagway Highway lie 8 kilometres east of the property.

A central camp was located in the Wheaton Valley on Mt. Anderson during July and August, 1985. Frontier Helicopters based on the Wheaton River airstrip at Butte Creek provided set-outs and pick-ups on the east side and higher elevations of the claim group.

1-3: PHYSIOGRAPHY AND VEGETATION

The Wheaton River area lies along the western flank of the Yukon plateau and immediately east of the Coast Ranges. The terrain varies from rolling hills to elevated plains incised by wide, deep u-shaped valleys with hanging valleys remaining from the Pleistocene glaciation.



VANCAL 11928

The RYE 1-70 group is characteristic of the regional topography in that the west side of Gray Ridge has steep, rugged slopes up to 3000 feet high which form the east valley side of the U-shaped Wheaton River. Outcrop exposure is good above the tree line at 1370 metres elevation. Several steep, v-shaped streams drain the property on the east side.

1-4: HISTORY OF THE PROPERTY

The RYE 1-70 claims were staked June 10, 1984 (Figure 2) following examination of a rare geological map by D.D. Cairnes (1917). This map is much more detailed than the current map by Wheeler (1961) and shows a large rhyolite dyke swarm on Gray Ridge.

Preliminary field work was conducted October 8-12, 1984. Geological mapping, rock, soil and pan concentrate sampling was done July 26, 29 and 30, 1985.

Claims and Ownership

Claim Name	Grant (Tag) No.	Date Claim Recorded
RYE 1-70	YA82222-YA82291	June 14, 1984

Noranda Exploration Company, Limited (No Personal Liability) has 100% interest in each mining claim named above. Upon acceptance of this assessment report, the claims will be in good standing until June 14, 1987.

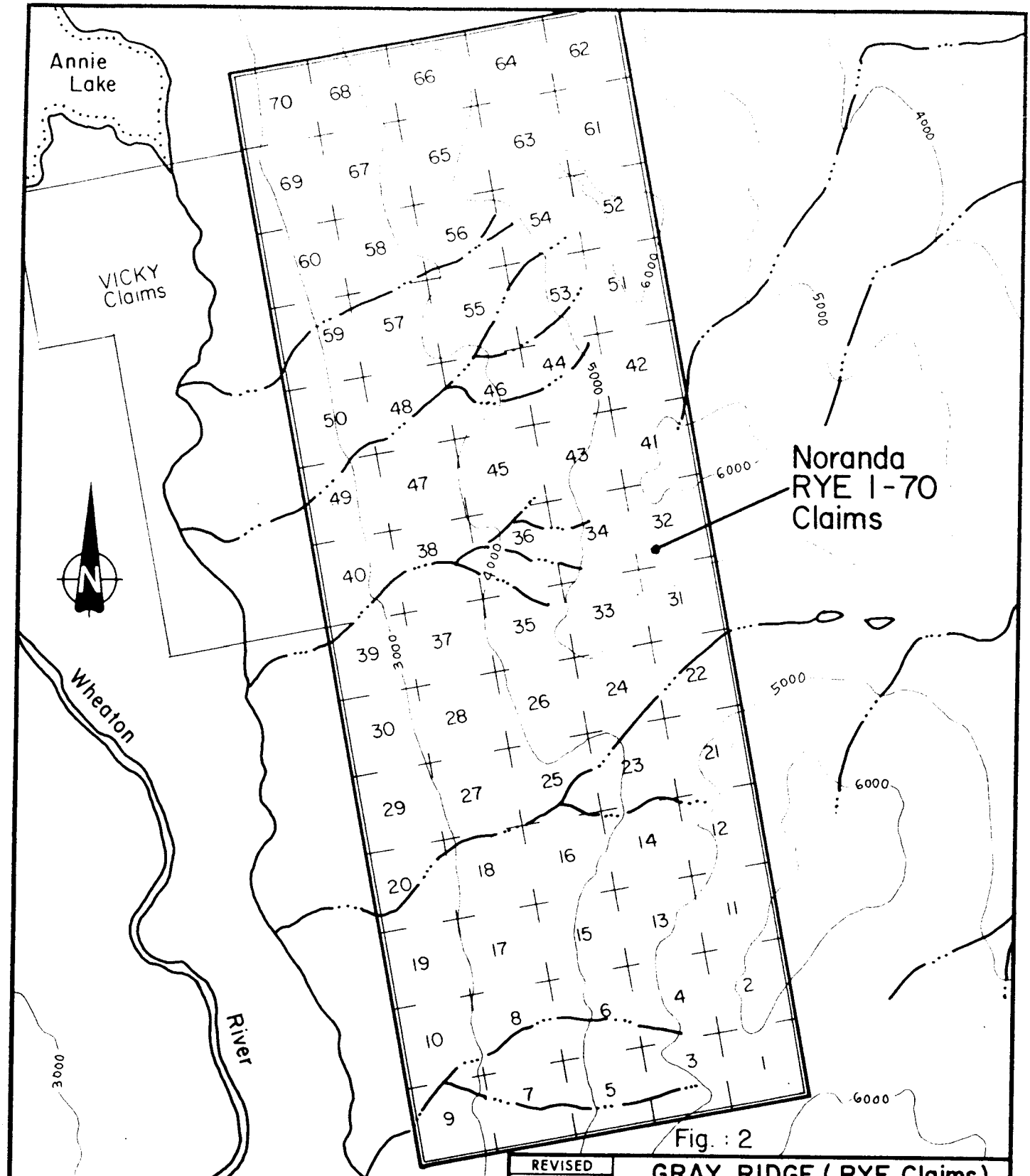


Fig. : 2

REVISED	GRAY RIDGE (RYE Claims)
	Claim Location Map
PROJ. No. 81	SURVEY BY: _____ DATE: MAY 85
N.T.S. 105D7	DRAWN BY: AI SCALE: 1: 31680
DWG. No.	NORANDA EXPLORATION
	OFFICE: Whitehorse

VANCAL 11827

1-5: WORK PROGRAM

Preliminary follow-up field work and detailed mapping was conducted on the RYE claims on July 26, 29 and 30, 1985. The work program included geological mapping, rock and stream sample geochemistry. Geological mapping was done at 1:10,000 scale from airphoto and N.T.S. map 105 D/7E enlargements.

The exploration crew was camped on Mt. Anderson approximately 16 kilometres southwest of Gray Ridge. Frontier Helicopters, based on the Wheaton River valley airstrip at Butte Creek, provided set-out and pick-up service for the crew.

Personnel involved in the 1985 field program are listed below.

Mary Webster	Party Chief
Stuart MacKenzie	Senior Assistant
Steve Mackay	Senior Assistant
Shirley Abercrombie	Senior Assistant
Arthur Fekete	Junior Assistant
John Nash	Junior Assistant

CHAPTER TWO: GEOLOGY

2-1: REGIONAL GEOLOGY

The geology and mineral potential of the area has been documented by D.D. Cairnes (1912, 1916), J.O. Wheeler (1961), and more recently by M.J. Smith (1979), M.B. Lambert (1974) and the Northern Cordillera Mineral Inventory (Archer, Cathro & Associates Ltd., 1981).

The oldest rocks in the region are the Precambrian metasediments of the Yukon Group (Table 1). The Yukon Group quartz-mica schists, feldspathic gneisses and crystalline limestone occur as a northwest trending belt intruded by granitic rocks of the Cretaceous Coast Intrusions. The Triassic Lewes River Group metavolcanic rocks and Jurassic Laberge Group metasediments unconformably overlie the Yukon Group and occupy the northeastern part of the Wheaton River area. The Lower Tertiary Skukum Group[1] is comprised of intermediate to felsic volcanic rocks which occur in the centre of the Wheaton River area and as part of the Bennett Lake complex 20 km to the south at the Yukon-B.C. border.

---

1. The Skukum Group volcanics have been described as the "Carmacks basalts" and "Wheaton River Volcanics" (Cairnes, 1912, p. 64 and 68), the "New Volcanics" and "Acid Volcanics" (Cockfield and Bell, 1926, p. 34), and recently as two groups subdivided into seven members of defined composition and texture (Pride, 1983, p. 94-104).

TABLE 1: TABLE OF FORMATIONS

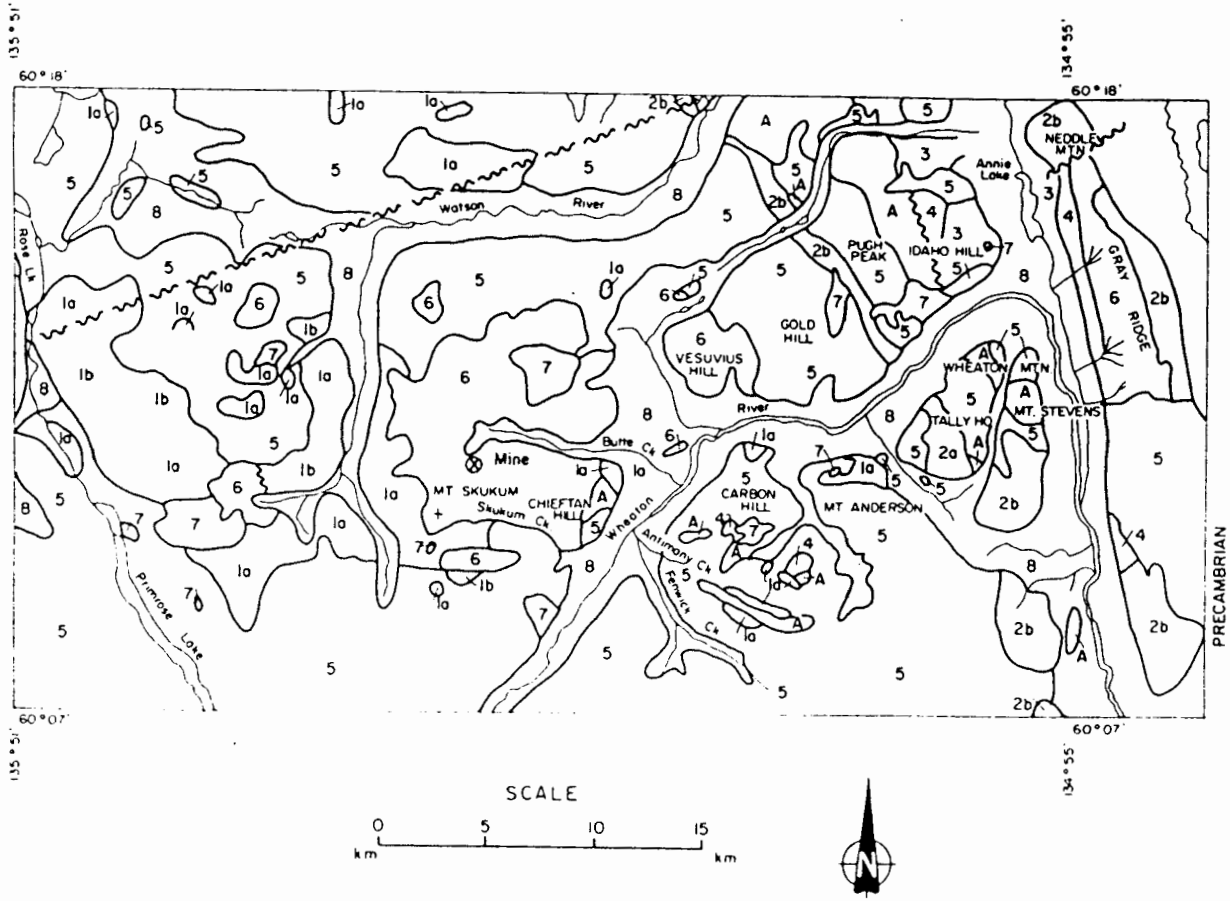
ERA	PERIOD or EPOCH	FORMATION	LITHOLOGY
Cenozoic	Recent and Pleistoce		Glacial debris, loess, volcanic ash Basalt; minor pyroclastic rocks
			----------UNCONFORMITY----------
	Tertiary		Granite Porphyry, Rhyolite
			----------INTRUSIVE INTO LOWER SKUKUM GP.-----
		Skukum Group	Andesite, basalt, rhyolite, trachyte breccia, tuffs, flows. Granitic breccia, minor greywacke, sandstone and siltstone.
Mesozoic	Cretaceous	Coast Intrusions	Hbld-bio-oligoclase granodiorite diorite, granite, pegmatitic syenite
			----------INTRUSIVE CONTACT ----------
		Hutahi Group	Basalt, andesite, porphyritic andesite, qtz latite & rhyolite flows, breccias and tuffs; minor greywacke, argillite; conglomerate locally at base
	Upper Jurassic	Tantalus Fm	Arkose, siltstone, congl. argillite, coal
	Lower Jurassic	Laberge Group	Conglomerate, greywacke, arkose quartzite, siltstone, argillite, hornfels
			----------UNCONFORMITY----------
	Upper Triassic	Lewes River Group	Volcanic greywacke, siltstone, argillite, limestone breccia, conglomerate; volcanic breccia, agglomerate, tuff; andesite porphyritic andesite & basalt
Paleozoic	Pennsylvanian(?) & Permian	Taku Group	Limestone, breccia, chert; greenstone and (?) pyroclastic rocks
Precambrian		Yukon Group	Quartz-mica, qtz-chlorite and mica schists; quartzite, feldspathic hbld gneiss, amphibolite, epidote-amphibolite crystalline limestone; felds-pathic gneiss, lit-par-lit gneiss; gneissic porphyritic granodiorite & quartz diorite

The Bennett Lake complex consists of a rhyolite to dacite ash flow, breccia and tuff volcanic package in part circumscribed by a high level rhyolite ring dyke with related intrusions. Lambert describes this complex as "two nested calderas, an eroded structural dome and a thick succession of pyroclastic and epiclastic rocks related to eruption, subsidence and filling of the cauldrons" (Lambert, 1974, p. 9).

Lambert suggested that the Skukum region may represent a second caldera complex with grossly similar geology and structural characteristics.

The Skukum complex occupies approximately 140 km^2 and is elliptical in plan. It is partially fault bounded and in places intruded by felsic dykes and stocks. A major north trending fault divides the Skukum ellipse into two parts which are made up of probably genetically related interlayered sedimentary-volcanic units. On the west side, andesitic flows, pyroclastic flows and sedimentary units up to 500 metres thick are found. The eastern block consists of altered pyroclastic, brecciated, flow banded and spherulitic felsic lava flows up to 800 metres thick. Cogenetic high level rhyolite to dacite intrusions punctuate the perimeter of the complex. These rhyolites are thought to represent late ring fracture intrusions associated with a caldera event (Pride, nee Smith, 1981).

Vein occurrences are spatially related to the ring structure in both the Bennett Lake and Skukum volcanic complexes. This mineralization is thought to be linked to hydrothermal and structural events of late stage caldera development.



SCALE

0 5 10 15 km

Legend

CENOZOIC

Quaternary

8 — Alluvium, glacial deposits, volcanic ash, loess.

Tertiary or Earlier

7 — Rhyolite

6 — SKUKUM GROUP
Andesite, basalt, rhyolite and trachyte breccia tuffs & flows, granitic conglomerate, minor greywacke.

MESOZOIC

Cretaceous

5 — COAST INTRUSIONS
Granodiorite, quartz diorite.

Jurassic (?) and Cretaceous

4 — TANTALUS FORMATION
Arkose, siltstone, conglomerate, argillite, coal.

Jurassic

3 — LABERGE GROUP
Greywacke, arkose, quartzite, conglomerate, siltstone, argillite, hornfels

Triassic

2 — LEWES RIVER GROUP
A) Limestone, limestone breccia.
B) Metamorphosed rocks

PRECAMBRIAN and LATER

1 — YUKON GROUP
A) Quartz-mica, quartz chlorite and mica schists, micaceous quartzite, gneiss, amphibolite
B) Crystalline limestone

A — Volcanic rocks of uncertain age

Fig. : 3

REVISED	WHEATON RIVER Property
	REGIONAL GEOLOGY (Modified from SMITH, 1981)
Field No.	SURVEY BY ____ DATE MAY 85
105 D	DRAWN BY AI SCALE ____
DWG No.	NORANDA EXPLORATION
	OFFICE Whitehorse

2-2: DETAILED GEOLOGY

Geological mapping at the 1:10,000 scale of the RYE 1-70 group indicates that the oldest rocks on the claims are metamorphosed volcanic and sedimentary rocks of the Triassic Lewes River Group. The Jurassic Laberge Group clastic sediments overlie the Lewes River Group but the majority of outcrop on the property belongs to the Cretaceous Hutshi Group. The Hutshi Group includes basalt, andesite, quartz latite and rhyolite flows, breccias, and tuffs, conglomerate, minor greywacke and argillite. Green basalts and andesites are prominent in the upper levels of the property. Rhyolite dykes crop out in the central creek above the camp site but not all the rhyolite dykes mapped by Cairnes have been located. Rhyolite "dykes" were found to be concordant to the andesite flow units within the upper part of the Hutshi Group sequence.

The Cretaceous Coast Intrusion granodiorite intrudes the Hutshi and Laberge groups in the south part of the claim group. A west draining stream marks this sharp contact which extends east across the entire width of Gray Ridge. The Coast Intrusion varies vertically from hornblende-biotite rich granodiorite to quartz diorite near the top of the ridge.

Later intrusions, as quartz veins or mafic dykes, cross-cut older lithologies but have no significant associated alteration.

Rock Descriptions

Lewes River Group:

Greywacke: light to dark grey sandy matrix comprised of sub-rounded clear to smokey quartz grains <2 mm diam.; angular lithic volcanic fragments dark green to maroon, <5 mm diam., locally porphyritic with feldspar phenocrysts having minor clay alteration; grey, very fine-grained clay(?) cement; minor pyrite (5%), very fine-grained up to 2 mm, disseminated cubic grains.

Tuff: compacted, angular, grey-green to maroon equigranular volcanic (andesite?) fragments generally <4 mm diam.; some fragments porphyritic with clay altered feldspar or rare clear phenocrysts <2 mm diam., locally fragments are amygdaloidal with chlorite, epidote quartz or minor calcite fillings.

Laberge Group:

Sediments: interbedded argillite and minor greywacke.

Argillite: brown to black, fine-grained, fissile weathered surface, minor rusty iron oxide staining, local calcareous zones <1 m wide parallel to bedding, disseminated cubic pyrite (max. 5%) <3 mm in diam. Unit exposed over 10 m thickness.

Greywacke: interbedded with argillite, graded to poorly bedded, locally containing platey argillite fragments at base of unit near argillite contact, minor quartz rich sandy matrix

Hutshi Group:

Andesite: dark green to brownish, porphyritic flows, minor tuff and breccia fragments up to 5 cm diam., very fine-grained, pale grey-green matrix with feldspar phenocrysts partially clay altered, grey weathered surface, chloritic and silicic alteration. Biotite 2%, hornblende 3% and disseminated pyrite very fine-grained up to 5%. Fe oxide and chlorite occasionally found on fracture surfaces.

Rhyolite: light grey to buff, conformable units up to 2 m thick, porphyritic, minor clay alteration of subhedral feldspar phenocrysts 2 mm diam. Aphanitic to saccharoidal fine-grained matrix, minor 2% disseminated pyrite.

Coast Intrusions:

Medium to coarse-grained equigranular hornblende-biotite granodiorite. Clear to grey subhedral quartz grains average 0.5 cm diam., plagioclase, K-feldspar, minor muscovite and disseminated pyrite grains. Chlorite alteration of biotite, rare chlorite coating along fracture plane surfaces. Clay alteration of feldspar.

Late Intrusions

Mafic Dykes:

Dark green to brown, very fine-grained, porphyritic basalt subhedral calcareous phenocrysts <3 mm diam., minor clay alteration at margins <2 cm wide which are locally calcareous, contacts sharp. Chlorite up to 5%, minor disseminated pyrite.

Quartz Veins:

Narrow (max. 10 cm wide), white to grey massive quartz veins, cross-cut granodiorite. Very little alteration, minor chlorite, epidote specks along margins, no visible sulphides.

CHAPTER THREE: GEOCHEMISTRY

During the 1985 work program a total of 91 soil, 13 silt, 15 rock and 12 pan concentrate samples were analyzed for Cu, Zn, Pb, Ag, Mo and Au by Noranda Exploration Co. Ltd. in Vancouver, B.C.

3-1: STREAM SAMPLING PROGRAM

Helicopter pan concentrate and silt sampling was done on east and north draining streams of the RYE 1-70 claims (Figure 5). A total of 12 pan concentrate and 13 silt samples were taken during the 1985 sampling program.

Two gold anomalies had values of 1700 ppb and 1800 ppb Au in pan concentrate samples (H70726 and H69611) taken from narrow streams draining east and north from Mount Gillian above 4,500' elevation. The silt samples taken at the same location (S71095 and S71088 respectively) do not show precious metal anomalies, however, silt sample (S71095) reported a weak zinc enhancement of 170 ppb Zn. Pan concentrate samples H69612, H69683 and H69851 have values of 40 ppb, 90 ppb and 60 ppb Au respectively. Streams draining north and east from Mount Gillian range from 40 ppb to 1800 ppb Au with the exception of 10 ppb Au (sample H69614) taken from a tributary adjacent to sample H70426 (1700 ppb Au). To the north, pan concentrate samples H69683 and H69856 have gold values of 90 ppb Au and 200 ppb Au.

It is observed that silt samples have failed to detect precious metal anomalies found in pan concentrate samples taken at the same location.

3-2: SOIL SAMPLING PROGRAM

Three soil lines 800 metres, 1000 metres and 300 metres in length were sampled at 25 metre intervals in the east central and north part of the claims.

Line 0+00E, 0+00 to 8+00N sampled the valley south of Mount Gillian which recovered the only gold anomaly (20 ppb Au, sample 35447)) from 91 talus fines samples taken during the 1984 preliminary work program. No gold anomalies were detected on L-0+00E. A slight silver enhancement which ranged up to 0.6 ppm Ag at stations 4+25N and 4+75N was found at the base of the valley. The highest values found along this line, including one independent soil sample (P70376), are as follows: 42 ppm Cu, 80 ppm Zn, 26 ppm Pb, 0.6 ppm Ag, 1 ppm Mo and 10 ppb Au.

Line 1+00E, 0+00 to 10+00N was taken at the north edge of the property over the projected extension of rhyolite dykes found in the narrow valley 1.0 to 2.0 km southwest from the ridge top. No significant anomalies were found and the highest value for each element analyzed is as follows: 28 ppm Cu, 90 ppm Zn, 30 ppm Pb, 0.4 ppm Ag, 2 ppm Mo and 10 ppb Au. Line 2+00E extends 300 metres northeast from Line 1+00E at station 5+50N and geochemical results are similar to Line 1+00E.

The results of six independent soil samples taken from gossanous, friable rhyolite and pyritic sedimentary rocks in the creek valley southwest from L-1+00E are summarized in the following table.

	Cu	Zn	Pb	Ag	Mo
P69594	66	600	28	1.2	18
P69595	28	290	14	0.6	4
P69596	120	790	36	0.6	44
P70419	28	210	18	0.4	4
P70420	22	160	20	0.4	2
P70421	22	170	16	0.4	2

All samples ran 10 ppb Au.

Sample P69594 was taken on the north side of the west draining stream below rhyolite dykes noted to be anomalous in zinc in rock samples R70422-24. Soil samples P69595, P70419-21 were taken from reddish brown soils on the south side of the creek which appear to lie along the projected extension of the same rhyolite dykes which crop out a few metres of the stream. Sample P69596 was taken on the south bank of the stream on strike to a rhyolite dyke which crops out to the north of the stream.

3-3: ROCK GEOCHEMISTRY

A total of 15 samples were taken on the ridge north of Mount Gillian and in the northernmost stream basin on the property which drains from the ridge.

A quartz vein in andesitic host rocks belonging to the Hutshi Group ran 150 ppm Cu, 110 ppm Zn, 180 ppm Pb, 0.6 ppm Ag, 4 ppm Mo and 10 ppb Au (R70425). A second quartz vein ran 80 ppm Zn, 200 ppm Pb and 0.6 ppm Ag

(R70416) in Laberge Group sediments approximately 1 km to the west of R70425. The geochemical results of rock samples taken from rhyolite dykes which crop out in the northernmost stream basin west of the central ridge are summarized in the table below.

	Cu	Zn	Pb	Mo
R69593	4	60	32	1
R69597	4	60	22	1
R70414	66	110	32	1
R70417	20	70	34	1
R70422	22	150	48	2
R70423	25	140	56	2
R70424	14	210	58	4

All of the samples listed above had values of 0.2 ppm Ag and 10 ppb Au. A slight Zn-Mo enhancement is observed in the prominent bleached rhyolite dykes which crop out in the stream basin north of the creek at an elevation of approximately 4,000 feet.

Quartz-carbonate float boulder samples (R70092-94) were collected along the ridge north of Mount Gillian. Sample R70092 contains a 3 cm wide, white quartz vein with 1% disseminated pyrite in a green, porphyritic basalt host rock. This sample returned the highest geochemical results of the three float samples taken and failed to show significant anomalies in base or precious metals as follows: 110 ppm Cu, 120 ppm Zn, 56 ppm Pb, 0.2 ppm Ag and 10 ppb Au.

CHAPTER FOUR: CONCLUSIONS AND RECOMMENDATIONS

The RYE 1-70 claims were staked to cover rhyolite units mapped by Cairnes (1917) thought to be spacially related to fracture systems and mineral occurrences of the Mt. Skukum caldera complex in the Wheaton River area. Detailed soil, talus fines, rock and stream sampling on the west side of the claims has failed to detect significant precious metal anomalies. Detailed soil and rock samples of quartz-carbonate veins and float material, rhyolite dykes and gossans has not identified significant precious metal values in these rock domains.

Significant gold anomalies (40 to 1800 ppb Au) have been detected at higher elevations (>4,500') in pan concentrate samples taken to the east and north of Mount Gillian. Follow-up prospecting and detailed stream sampling of the north and east flanks of Mount Gillian is recommended. Short traverses may be done along streams to the north, however, steep stream banks and ridges are found to the east. Helicopter support is recommended to facilitate quick access and relocation of crews during the day. No further work is recommended to the west or south of Mount Gillian.

Respectfully submitted,

Mary P. Webster
Field Geologist

134°55'

6434'

Mount Gilliam

Noranda RYE Claims

Wheaton River

Surprise Mountain

60°15'

Legend

QUATERNARY
- 6 ALLUVIUM

- 5 INTRUSIVES
  (a) rhyolite dyke / flow (re. Hutshi Group)
  (b) mafic dyke

CRETACEOUS
- 4 COAST INTRUSIONS
  biotite - hornblende granodiorite.

- 3 HUTSHI GROUP
  basalt, andesite, quartz latite, rhyolite flows.

JURASSIC
- 2 LABERGE GROUP
  argillite, siltstone, greywacke, conglomerate.

TRIASSIC
- 1 LEWES RIVER GROUP
  greywacke, siltstone, conglomerate and tuffaceous equivalents.

Symbols

- Outcrop
- Bedding
- QV Quartz vein
- Schistosity
- Geological contact; real, assumed.

Scale 1:10,000

091799 Fig. 4

REVISED

GRAY RIDGE (RYE Claims)

Geology

PROJ. No. 81
N.T.S. 105 D 7
DWG No.

SURVEY BY MW
DRAWN BY AL, MW
DATE APR 86
SCALE 1:10 000

NORANDA EXPLORATION
OFFICE Whitehorse

H69684
Offset
H69856
S71091
H69857
S71092
134°55'
H69683
6434'
S69682
3500
Line 100E
1000N
800N
700N
R70094
Line 200E
300N
200N
100N
000N
550N
400N
200N
000N
5500
5000
4500
4000
3500
3000
R70092
R70093
R70425
R70423
R70424
R70422
P69594
R69592
R69593
P69595
P70421
P70420
P70419
R70417
R70418
R70416
P69596
R70415
R70414
R69597
6000
H69612
S69613
H69611
S71088
H70426
S71095
Mount
Gilliam
H69614
S71096
S69680
H69681
S71093
H69852
S71090
H69851
S71089
800N
600N
400N
200N
000N
Line 000E
P70376
6500
S71087
H69608
S71086
2500
Wheaton
River
Noranda RYE Claims
Surprise
Mountain
60°15'
134°55'

x Rock (R)
● Silt (S) & Pan Conc. (H)
■ Pan Conc. (H)
▲ Soil (P)
▸—▸ Soil line

0 100 200 400 800 meters
Scale 1:10,000

091799 Fig.: 5

REVISED	GRAY RIDGE (RYE Claims)
	Sample Location Map
PROJ. No. 81	SURVEY BY: MW DATE: APR 86
N.T.S. 105 D 7	DRAWN BY: AI SCALE 1:10,000
DWG. No.	NORANDA EXPLORATION
	OFFICE Whitehorse

REFERENCES

Buchanan, L.J., 1981. Precious metal deposits associated with volcanic environments in the southwest.

Cairnes, D.D., 1912. Wheaton District, Yukon Territory. G.S.C., Mem. 31.

Cockfield, W.E. and Bell, A.H., 1944. Whitehorse District, Yukon. G.S.C., Paper 44-14.

Northern Cordillera Mineral Inventory, 1981. Archer, Cathro and Associates.

Pride, M.J. (nee Smith), 1983. Interlayered sedimentary-volcanic sequence Mt. Skukum volcanic complex; Yukon Exploration and Geology 1983, pp. 94-104.

Smith, M.J., 1981. The Skukum volcanic complex, 105DSW: Geology and comparison to the Bennett Lake Cauldron complex; Yukon Exploration and Geology 1982, pp. 68-72.

Wheeler, J.O., 1961. Whitehorse map-area, Yukon Territory. G.S.C., Mem. 312.

STATEMENT OF QUALIFICATIONS

I, Mary P. Webster, of the City of Whitehorse, Yukon Territory do hereby certify that:

1. I have been employed as a Geologist by Noranda Exploration Company, Limited (No Personal Liability) since May 1984.

2. I am a graduate of McMaster University, Hamilton, Ontario with a B.Sc. in Geology.

3. I am a member of the Prospector's and Developers Association and the B.C. and Yukon Chamber of Mines.

4. I supervised and carried out part of the work described in this report.

Mary P. Webster

Mary P. Webster
Field Geologist
Noranda Exploration Co. Ltd.
(No Personal Liability)

STATEMENT OF COSTS

PROJECT: RYE 1-70 Claims

Labour:		
12 mandays at 126.50 per day July 26, 29, 30		1,518.00
Food and Accommodation:		
16 mandays at 45.00 per day		720.00
Transportation:		
Vehicle Rental/Gas		856.49
Helicopter - 3.7 hrs		1,831.50
Geochemistry:		
Analysis		1,277.10
Shipment		348.24
Report Preparation:		
5 mandays at 126.50 per day		632.50
	TOTAL	$7,183.83

DETAILED COST OF ANALYSIS

PROJECT: RYE 1-70 Claims

Element	Number of Determinations	Cost per Determination	Total
Cu	131	1.60	209.60
Pb	131	.60	78.60
Zn	131	.60	78.60
Mo	131	.60	78.60
Ag	131	.60	78.60
Au	131	4.00	524.00
Sample Preparation:			
Soils/silts	104	.50	52.00
Rock	15	1.00	15.00
Pan Concentrate	12	1.50	18.00
Data Entry	131	1.10	144.10
		TOTAL	$1,277.10

APPENDIX 1

ROCK SAMPLE DESCRIPTIONS

ROCK SAMPLE DESCRIPTIONS

RYE 1-70 CLAIMS

SAMPLE	LOCATION AND DESCRIPTION	TYPE
69592	Metamorphosed Lithic Sandstone: gray on weathered surface, felsic fragments 2 mm diameter, 15% of rock, trace py/po	Grab
69593	Rhyolite: orange to white weathered surface, medium grained, feldspar fragments 2 mm diameter, 10-15% of rock, joint 170/70°W, no visible sulphides	Grab
69597	Rhyolite: orange weathering, fine grained, minor feldspar phenocrysts, blocky weathering, in contact with black argillite, no visible sulphides	Grab
70092	White, generally massive quartz vein cutting green porphyritic (feldspar) basalt ~3 cm wide, ~10% calcite, very little alteration, <1% disseminated pyrite	Float
70093	Coarse crystalline calcite: white, some pinkish areas, no visible sulphides	Float
70094	White quartz, calcite vein: no visible sulphides, qtz either massive or in small subhedral crystals (<3 mm long)	Float
70414	Rhyolite: 2.3 m wide conformable unit, porphyritic with minor 4% py cubes. Beige to light white, fine grained, clean contact with argillites. 220°/20°E	
70415	Rhyolite: As 70414 but larger mass 4 m x 4 m within dirty quartzite contacts covered with overburden	
70416	Quartz vein up to 10 cm 110/20°E: white crystalline bull quartz, no sulphides	
70417	Rhyolite dyke: unconformable to black argillite dyke, light beige porphyritic contacts clean, no alteration 108/60°E	
70418	Rhyolite Dyke 182/38°E: 2 m wide, light beige porphyritic host quartzite, little clay 2-3 m at contact	

SAMPLE	LOCATION AND DESCRIPTION	TYPE
70422	Rhyolite Dyke: unconformable to host quartzite, 2 m wide margins buried by talus, prominent topography 2 m raised above talus slope, 220/90°, py cubes 1-2 mm, 3% dissem.	
70423	Rhyolite as 70422, parallel, 1 m wide dyke	
70424	As 70422, 23	
70425	Andesite: siliceous, pyrite up to 5% dissem. and stained weathered surface, fine grained, dark green calcite phenocrysts up to 3 mm cubic	

APPENDIX 2

GEOCHEMICAL RESULTS

NORANDA EXPLORATION COMPANY, LIMITED
GEOCHEMICAL RESULTS - RYE 1-70 CLAIMS

SAMPLE NO.	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Mo ppm	Au ppb
ROCKS:						
69592	6	70	34	.6	1	10
69593	4	60	32	.2	1	10
69597	4	60	22	.2	1	10
70092	110	120	56	.2	1	10
70093	16	70	40	.2	1	10
70094	6	72	30	.2	1	10
70414	66	110	32	.2	1	10
70415	4	130	20	.2	1	10
70416	10	80	200	.6	1	10
70417	20	70	34	.2	1	10
70418	84	190	110	.2	1	10
70422	22	150	48	.2	2	10
70423	25	140	56	.2	2	10
70424	14	210	58	.2	2	10
70425	150	110	180	.6	4	10
SOILS:						
0.0E-0.0N	28	68	4	.4	1	10
.25	34	70	8	.4	1	10
.50	24	66	8	.4	1	10
.75	30	74	8	.4	1	10
1.00	34	78	6	.4	1	10
1.25	28	64	2	.2	1	10
1.50	26	68	4	.2	1	10
1.75	32	78	6	.4	1	10
2.00	20	64	4	.2	1	10
2.25	16	56	8	.4	1	10
2.50	24	62	8	.2	1	10
2.75	20	56	4	.2	1	10
3.00	24	66	2	.2	1	10
3.25	30	66	2	.2	1	10
3.50	20	70	6	.4	1	10
3.75	18	68	6	.2	1	10
4.00	18	76	6	.4	1	10
4.25	24	64	6	.6	1	10
4.50	20	72	26	.2	1	10
4.75	42	68	10	.6	1	10
5.00	26	70	10	.4	1	10
5.25	18	64	10	.4	1	10
5.50	16	64	8	.4	1	10
5.75	18	70	10	.4	1	10
6.00	22	74	12	.2	1	10
6.25	22	72	10	.2	1	10
6.50	24	68	8	.4	1	10
6.75	14	66	6	.2	1	10
7.00	14	60	4	.2	1	10
7.25	14	60	4	.2	1	10
7.50	18	66	12	.2	1	10
7.75	28	62	12	.2	1	10
8.00	20	64	12	.4	1	10

SAMPLE NO.	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Mo ppm	Au ppb
1.0E-0.0N	18	64	16	.4	1	10
.25	22	76	12	.2	1	10
.50	10	64	16	.2	1	10
.75	24	66	6	.2	1	10
1.00	20	54	2	.2	1	10
1.25	14	50	10	.4	2	10
1.50	14	64	16	.2	2	10
1.75	14	90	30	.2	1	10
2.00	12	66	20	.2	2	10
2.25	12	50	20	.4	1	10
2.50	14	62	14	.4	2	10
2.75	14	70	14	.2	2	10
3.00	14	70	12	.2	1	10
3.25	10	62	20	.2	1	10
3.50	16	60	10	.2	1	10
3.75	16	64	10	.2	1	10
4.00	18	58	4	.2	1	10
4.25	18	68	16	.2	1	10
4.50	18	60	6	.2	1	10
4.75	16	66	12	.2	1	10
5.00	24	78	8	.2	1	10
5.25	22	76	6	.2	1	10
5.50	14	80	6	.2	1	10
5.75	22	72	8	.2	1	10
6.00	28	64	14	.2	1	10
6.25	28	68	8	.2	1	10
6.50	22	74	2	.2	1	10
6.75	26	70	2	.2	1	10
7.00	26	70	2	.2	1	10
7.25	26	76	4	.2	1	10
7.50	26	88	6	.2	1	10
7.75	24	80	6	.2	1	10
8.00	22	76	4	.2	1	10
8.25	22	64	8	.2	1	10
8.50	24	70	4	.2	1	10
8.75	18	78	4	.2	1	10
9.00	18	76	4	.2	1	10
9.75	16	76	4	.2	1	10
10.00	16	78	4	.2	1	10
2.0E-.25N	20	74	4	.2	1	10
.50	20	56	2	.2	1	10
.75	18	64	4	.2	1	10
1.00	20	62	4	.2	1	10
1.25	18	66	4	.2	1	10
1.50	22	64	4	.2	1	10
1.75	20	60	2	.2	1	10
2.00	20	56	4	.2	1	10
2.25	20	62	6	.2	1	10
2.50	20	60	4	.2	1	10
2.75	22	66	4	.2	1	10
3.00	18	58	6	.2	1	10
69594	66	600	28	1.2	18	10
69595	28	290	14	.6	4	10
69596	120	790	36	.6	44	10
70376	18	80	6	.4	1	10
70419	28	210	18	.4	4	10
70420	22	160	20	.4	2	10
70421	22	170	16	.4	2	10

SAMPLE NO.	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Mo ppm	Au ppb	
SILTS:							
69613	16	72	8	.2	1	10	
69682	74	98	20	.4	1	10	
71086	8	52	6	.2	1	10	
71087	8	44	6	.2	1	10	
71088	12	56	2	.2	1	10	
71089	6	58	1	.2	1	10	
71090	8	56	2	.2	1	10	
71091	24	100	20	.2	2	10	
71092	28	88	8	.2	1	10	
71093	10	62	2	.2	1	10	
71094	16	90	8	.2	2	10	
71095	40	170	6	.2	14	10	
71096	8	64	4	.2	2	10	
PAN CONCENTRATES:							wt(g)
69608	6	48	1	.4		10	30.2
69611	10	72	1	1.0		1800	24.2
69612	16	160	1	.8		40	34.9
69614	4	36	1	.4		10	14.6
69683	14	86	1	.6		90	35.1
69851	2	38	1	.6		60	18.7
69852	6	46	1	.6		10	67.0
69856	10	60	1	.2		200	17.4
69857	12	58	1	.2		10	18.9
69681	4	40	1	.2		10	24.5
69684	12	80	1	.2		10	34.6
70426	8	52	1	.2		1700	11.3